

## CGA/VGA JAMMA

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CGAV, CALAMBA

CLASSICAL

GAME

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## I. PCB DIP Switch Settings

DIP SW3		1	2	3	4
Screen Orientation	Normal	OFF			
	Flip Screen	ON			
Display Mode (CRT)	CGA-15.75Khz		OFF		
	VGA-31.5Khz		ON		
High Score Saver	Disabled			OFF	
	Enabled			ON	

## II. System Setup

Keep **TEST SW** or **SERVICE SW** pressed and power on to enter system setup mode or system test mode.

The first page is **Screen Test**. You may tune your screen size at this page or press **TEST SW** to enter next page.

If high score saver is supported and enabled, the second page is **Clear High Score**. You may clear all saved high scores by pressing both **START** and **S1** buttons. Press **TEST SW** to enter next page or press **SERVICE SW** to return last page.

The next page is **System DIPSW Setup**. Use joystick to move cursor or **S1** buttons to switch ON/OFF. The system DIPSW is shown below:

### System DIPSW Setup for All Amusement PCBs

DIP SW1		1	2	3	4	5	6	7	8
Coin 1	1 coin 1 credit	OFF	OFF	OFF	OFF				
	1 coin 2 credit	ON	OFF	OFF	OFF				
	1 coin 3 credit	OFF	ON	OFF	OFF				
	1 coin 4 credit	ON	ON	OFF	OFF				
	2 coin 1 credit	OFF	OFF	ON	OFF				
	2 coin 2 credit	ON	OFF	ON	OFF				
	2 coin 3 credit	OFF	ON	ON	OFF				
	2 coin 4 credit	ON	ON	ON	OFF				
	3 coin 1 credit	OFF	OFF	OFF	ON				
	3 coin 2 credit	ON	OFF	OFF	ON				
	3 coin 3 credit	OFF	ON	OFF	ON				
	3 coin 4 credit	ON	ON	OFF	ON				
	4 coin 1 credit	OFF	OFF	ON	ON				
	4 coin 2 credit	ON	OFF	ON	ON				
	4 coin 3 credit	OFF	ON	ON	ON				
	4 coin 4 credit	ON	ON	ON	ON				

Coin 2	1 coin 1 credit					OFF	OFF	OFF	OFF
	1 coin 2 credit					ON	OFF	OFF	OFF
	1 coin 3 credit					OFF	ON	OFF	OFF
	1 coin 4 credit					ON	ON	OFF	OFF
	2 coin 1 credit					OFF	OFF	ON	OFF
	2 coin 2 credit					ON	OFF	ON	OFF
	2 coin 3 credit					OFF	ON	ON	OFF
	2 coin 4 credit					ON	ON	ON	OFF
	3 coin 1 credit					OFF	OFF	OFF	ON
	3 coin 2 credit					ON	OFF	OFF	ON
	3 coin 3 credit					OFF	ON	OFF	ON
	3 coin 4 credit					ON	ON	OFF	ON
	4 coin 1 credit					OFF	OFF	ON	ON
	4 coin 2 credit					ON	OFF	ON	ON
	4 coin 3 credit					OFF	ON	ON	ON
	4 coin 4 credit					ON	ON	ON	ON

DIP SW2		1	2	3	4	5	6	7	8
Demo Music	Yes	OFF							
	No	ON							
Game Demo Sound	No		OFF						
	Yes		ON						
Demo Music Mode	Model			OFF					
	Mode2			ON					
Free Play	No				OFF				
	Yes				ON				
Cabinet	Upright/1 Joystick					OFF	OFF		
	Cocktail					ON	OFF		
	Upright/2 Joysticks					OFF	ON		
	Cocktail					ON	ON		

Each game can be enabled or disabled respectively. Disabled games would not be shown for playing. Press setup to finish this step or press TEST SW to enter followed pages for DIPSW setup of each game or SERVICE SW to return last page.

The last two pages are **Volume Adjust** and **I/O Test**. You may adjust audio volume or diagnose PCB I/O status at these two pages.

For system test mode, only **Screen Test** and **I/O Test** pages are included.

If high score saver is enabled, high scores will be saved when players beat the record and each game is *completely* over.

### III. JAMMA Wire Map

Part Side		Solder Side	
GND	1	1	GND
GND	2	2	GND
+5V	3	3	+5V
+5V	4	4	+5V
	5	5	
+12V	6	6	+12V
	7	7	
1P COIN METER	8	8	2P COIN METER
	9	9	
SPEAKER +	10	10	SPEAKER -
	11	11	
VIDEO R	12	12	VIDEO G
VIDEO B	13	13	VIDEO SYNC
GND	14	14	SERVICE
TEST	15	15	
1P-COIN	16	16	2P-COIN
1P-START	17	17	2P-START
1P-UP	18	18	2P-UP
1P-DOWN	19	19	2P-DOWN
1P-LEFT	20	20	2P-LEFT
1P-RIGHT	21	21	2P-RIGHT
1P-S1	22	22	2P-S1
1P-S2	23	23	2P-S2
1P-S3	24	24	2P-S3
	25	25	
	26	26	
GND	27	27	GND
GND	28	28	GND

#### IMPORTANT NOTE:

The PCB voltage of +5V pin CAN NOT exceed +5.5V.

# Game List

Ms Pacman



Galaga



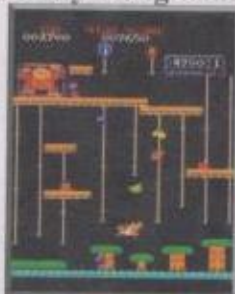
Frogger



Donkey Kong



Donkey Kong Junior



Donkey Kong 3



Galaxian



Dig Dug



Crush Roller



Mr. Do



Space Invaders



Pacman



Galaga3



Gyruss



Tank Battalion



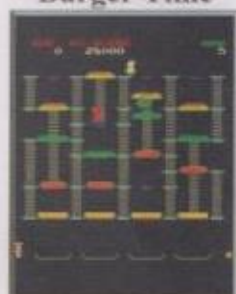
1942



Ladybug



Burger Time



Mappy



Centipede



Millipede



JR Pacman



Pengo



Phoenix



Time Pilot



Super Cobra



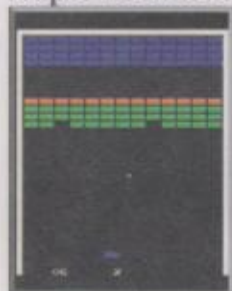
Hustler



Space Panic



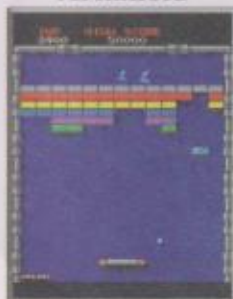
Super Breakout



New Rally X



Arkanoid



Qix



Juno Frist



Xevious



Mr. Do's Castle



Moon Cresta



Pinball Action



Scramble



Super Pacman



Bomb Jack



Shao-Lin's Road



King & Ballon



1943



Van-Van Car



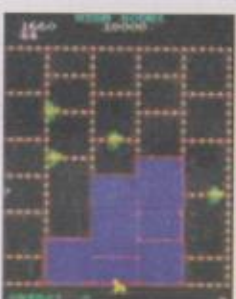
Pa-cman Plus



Dig Dug 2



Amidar



Zaxxon



## MS Pacman DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	5	OFF	OFF						
	3	ON	OFF						
	2	OFF	ON						
	1	ON	ON						
Extra life	None			OFF	OFF				
	20000			ON	OFF				
	15000			OFF	ON				
	10000			ON	ON				
Difficulty	Easy					OFF			
	Hard					ON			
Speed	Normal						OFF		
	Fast						ON		
Ms Pacman Bean	Heart							OFF	
	Dot							ON	

## Galaga DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Hardest	ON	OFF						
	Hard	OFF	ON						
	Medium	ON	ON						
Continuous Shooting	No			OFF					
	Yes			ON					
Extra Life	30k 80k	B O N U S 1	30k		OFF	OFF	OFF		
	20k 80k 80k		30k	150k 150k	ON	OFF	OFF		
	30k 120k 120k		30k 120k		OFF	ON	OFF		
	20k 60k 60k		30k 100k 100k		ON	ON	OFF		
	20k 60k	B O N U S 2	30k 150k		OFF	OFF	ON		
	20k 70k 70k		30k 120k 120k		ON	OFF	ON		
	30k 100k 100k		30k 100k		OFF	ON	ON		
	(None)				ON	ON	ON		
Life	5 (bonus2)							OFF	OFF
	3 (bonus1)							ON	OFF
	4 (bonus1)							OFF	ON
	2 (bonus1)							ON	ON

DIP SW2		1	2	3	4	5	6	7	8
Bullet Speed	Normal	OFF							
	Fast	ON							

## Frogger DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	7	ON	OFF						
	5	OFF	ON						
	3	ON	ON						

## Donkey Kong DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	7000			OFF	OFF				
	10000			ON	OFF				
	15000			OFF	ON				
	20000			ON	ON				

## Donkey Kong Junior DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	7000			OFF	OFF				
	10000			ON	OFF				
	15000			OFF	ON				
	20000			ON	ON				

## Donkey Kong 3 DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	30000			OFF	OFF				
	40000			ON	OFF				
	50000			OFF	ON				
	None			ON	ON				

Additional Bonus	30000					OFF	OFF		
	40000					ON	OFF		
	50000					OFF	ON		
	None					ON	ON		
Difficulty	Easy							OFF	OFF
	Medium							ON	OFF
	Hard							OFF	ON
	Hardest							ON	ON

### Galaxian DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	7000	OFF	OFF						
	10000	ON	OFF						
	12000	OFF	ON						
	20000	ON	ON						
Life	2			OFF					
	3			ON					

### Dig Dug DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Continue	No	OFF							
	Yes	ON							
Difficulty	Easy		OFF	OFF					
	Medium		ON	OFF					
	Hard		OFF	ON					
	Hardest		ON	ON					
Extra Life	None				OFF	OFF	OFF		
	20k 70k 70k				ON	OFF	OFF		
	10k 50k 50k				OFF	ON	OFF		
	20k 60k				ON	ON	OFF		
	10k 40k 40k				OFF	OFF	ON		
	10k 40k				ON	OFF	ON		
	20k 60k 60k				OFF	ON	ON		
	10k				ON	ON	ON		
Life	3							OFF	OFF
	5							ON	OFF
	1							OFF	ON
	2							ON	ON

### Crush Roller DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Difficulty	Easy			OFF					
	Hard			ON					

## Mr. Do DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Medium	ON	OFF						
	Hard	OFF	ON						
	Hardest	ON	ON						
Special	Easy			OFF					
	Hard			ON					
Extra	Easy				OFF				
	Hard				ON				
Life	3					OFF	OFF		
	4					ON	OFF		
	5					OFF	ON		
	2					ON	ON		

## Space Invaders DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	1500			OFF					
	1000			ON					
Mode	Color				OFF				
	B&W				ON				

## Pacman DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	5	OFF	OFF						
	3	ON	OFF						
	2	OFF	ON						
	1	ON	ON						
Extra Life	None			OFF	OFF				
	20000			ON	OFF				
	15000			OFF	ON				
	10000			ON	ON				
Difficulty	Easy					OFF			
	Hard					ON			
Ghost Name	Normal						OFF		
	Alternate						ON		
Speed	Normal							OFF	
	Fast							ON	

## Galaga3 DIPSW Setup

DIP SW1			1	2	3	4	5	6	7	8
Difficulty	0 (Easiest)		OFF	OFF	OFF					
	1		ON	OFF	OFF					
	2		OFF	ON	OFF					
	3		ON	ON	OFF					
	4		OFF	OFF	ON					
	5		ON	OFF	ON					
	6		OFF	ON	ON					
	7 (Hardest)		ON	ON	ON					
Life	3					OFF	OFF			
	2					ON	OFF			
	4					OFF	ON			
	5					ON	ON			
Extra Life	100k 300k 600k							OFF	OFF	OFF
	150k 400k							ON	OFF	OFF
	150k 400k 900k							OFF	ON	OFF
	100k 300k 300k							ON	ON	OFF
	50k 200k 300k							OFF	OFF	ON
	50k 150k 600k							ON	OFF	ON
	50k 150k 300k							OFF	ON	ON
	30k 150k 600k							ON	ON	ON

## Gyruss DIPSW Setup

DIP SW1			1	2	3	4	5	6	7	8
Life	3		OFF	OFF						
	4		ON	OFF						
	5		OFF	ON						
	3		ON	ON						
Extra Life	30k 60k				OFF					
	40k 70k				ON					
Difficulty	1 (Easiest)					OFF	OFF	OFF		
	2					ON	OFF	OFF		
	3					OFF	ON	OFF		
	4					ON	ON	OFF		
	5(Average)					OFF	OFF	ON		
	6					ON	OFF	ON		
	7					OFF	ON	ON		
	8 (Hardest)					ON	ON	ON		

## Tank Battalion DIPSW Setup

DIP SW1			1	2	3	4	5	6	7	8
Extra Life	None		OFF	OFF						
	20000		ON	OFF						
	15000		OFF	ON						
	10000		ON	ON						

Life	2			OFF					
	3			ON					

## 1942 DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	20k 80k	OFF	OFF						
	20k 100k	ON	OFF						
	30k 80k	OFF	ON						
	30k 100k	ON	ON						
Life	3			OFF	OFF				
	1			ON	OFF				
	2			OFF	ON				
	5			ON	ON				
Difficulty	Normal					OFF	OFF		
	Easy					ON	OFF		
	Hard					OFF	ON		
	Hardest					ON	ON		

## Ladybug DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Medium	ON	OFF						
	Hard	OFF	ON						
	Hardest	ON	ON						
High Score Names	10 Letters			OFF					
	3 Letters			ON					
Life	3				OFF				
	5				ON				

## Burger Time DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF							
	5	ON							
Extra Life	10000		OFF	OFF					
	15000		ON	OFF					
	20000		OFF	ON					
	30000		ON	ON					
Enemies	4				OFF				
	6				ON				
End of Lever Pepper	No					OFF			
	Yes					ON			

## Mappy DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	*5	ON	OFF						
	1	OFF	ON						
	2	ON	ON						

Extra Life	*30k 80k				OFF	OFF	OFF			
	20k 70k									
	*30k 100k				ON	OFF	OFF			
	20k 60k									
	*30k 120k				OFF	ON	OFF			
	20k 80k									
	*30k				ON	ON	OFF			
	30k 100k									
	*40k				OFF	OFF	ON			
	20k									
Rank	*30k 100k 100k				ON	OFF	ON			
	20k 70k 70k									
	*40k 120k 120k				OFF	ON	ON			
	20k 80k 80k									
	None				ON	ON	ON			
	A							OFF	OFF	OFF
	B							ON	OFF	OFF
	C							OFF	ON	OFF
	D							ON	ON	OFF
	E							OFF	OFF	ON
Rank	F							ON	OFF	ON
	G							OFF	ON	ON
	H							ON	ON	ON

## Centipede DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Language	English	OFF	OFF						
	German	ON	OFF						
	French	OFF	ON						
	Spanish	ON	ON						
Life	2			OFF	OFF				
	3			ON	OFF				
	4			OFF	ON				
	5			ON	ON				
Extra Life	10000					OFF	OFF		
	12000					ON	OFF		
	15000					OFF	ON		
	20000					ON	ON		
Difficulty	Easy							OFF	
	Hard							ON	
Move Speed	Normal								OFF
	Fast								ON

## Millipede DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Millipede Head	Easy	OFF							
	Hard	ON							
Beetle	Easy		OFF						
	Hard		ON						
Life	2			OFF	OFF				
	3			ON	OFF				
	4			OFF	ON				
	5			ON	ON				

Extra Life	12000					OFF	OFF		
	15000					ON	OFF		
	20000					OFF	ON		
	None					ON	ON		
Spider	Easy							OFF	
	Hard							ON	
Starting Score Select	No								OFF
	Yes								ON

DIP SW2		1	2	3	4	5	6	7	8
Language	English	OFF	OFF						
	German	ON	OFF						
	French	OFF	ON						
	Spanish	ON	ON						
Bonus	0			OFF	OFF				
	0 1x			ON	OFF				
	0 1x 2x			OFF	ON				
	0 1x 2x 3x			ON	ON				

### JR Pacman DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	1	OFF	OFF						
	2	ON	OFF						
	3	OFF	ON						
	5	ON	ON						
Extra Life	10000			OFF	OFF				
	15000			ON	OFF				
	20000			OFF	ON				
	30000			ON	ON				
Difficulty	Normal					OFF			
	Hard					ON			
Speed	Normal						OFF		
	Fast						ON		

### Pengo DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	50000	OFF							
	30000	ON							
Life	2		OFF	OFF					
	3		ON	OFF					
	4		OFF	ON					
	5		ON	ON					
Difficulty	Easy				OFF	OFF			
	Medium				ON	OFF			
	Hard				OFF	ON			
	Hardest				ON	ON			

Machine Set	Set1							OFF	
	Set2							ON	

## Phoenix DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	3K 30K			OFF	OFF				
	4K 40K			ON	OFF				
	5K 50K			OFF	ON				
	6K 60K			ON	ON				

## Time Pilot DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	5	ON	ON						
Extra Life	10k - 50k			OFF					
	20k 60k			ON					
Difficulty	1(Easiest)				OFF	OFF	OFF		
	2				ON	OFF	OFF		
	3				OFF	ON	OFF		
	4				ON	ON	OFF		
	5(Average)				OFF	OFF	ON		
	6				ON	OFF	ON		
	7				OFF	ON	ON		
	8(Hardest)				ON	ON	ON		

## Super Cobra DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Continue (Single Game Only)	Yes	OFF							
	No	ON							
Life	4		OFF						
	3		ON						

## Hustler DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	2	OFF							
	1	ON							

## Space Panic DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	3000	OFF							
	5000	ON							

Life	3	OFF							
	4	ON							

## Super Breakout DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Mode	Color	OFF							
	B&W	ON							
Life	3	OFF							
	5	ON							
Move Speed	Medium			OFF	OFF				
	Slow			ON	OFF				
	Fast			OFF	ON				
	Very Fast			ON	ON				
Time *	None					OFF	OFF	OFF	
	200P 200C 200D					ON	OFF	OFF	
	400P 300C 400D					OFF	ON	OFF	
	600P 400C 600D					ON	ON	OFF	
	900P 700C 800D					OFF	OFF	ON	
	1200P 900C 1000D					ON	OFF	ON	
	1600P 1100C 1200D					OFF	ON	ON	
	2000P 1400C 1500D					ON	ON	ON	

\* Note : P: Progressive C: Cavity D: Double

S1 Button : Select Progressive

S2 Button : Select Cavity

S3 Button : Select Double

## New Rally X DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	3Cars None	OFF	OFF						
	4Cars None								
	3Cars 20k/80k	ON	OFF						
	4Cars 20k								
	3Cars 20k/100k	OFF	ON						
	4Cars 40k								
	3Cars 20k/120k	ON	ON						
Life	3			OFF					
	4			ON					

## Arkanoid DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Continue	No	OFF							
	Yes	ON							
Difficulty	Easy		OFF						
	Hard		ON						
Extra Life	20k 60k 60k			OFF					
	20k			ON					

Life	3			OFF				
	5			ON				
Move Speed	Normal				OFF	OFF		
	Slow				ON	OFF		
	Fast				OFF	ON		
	Very Fast				ON	ON		

## Qix DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	5	OFF	OFF						
	4	ON	OFF						
	3	OFF	ON						
	2	ON	ON						
Threshold	60%			OFF	OFF	OFF			
	65%			ON	OFF	OFF			
	70%			OFF	ON	OFF			
	75%			ON	ON	OFF			
	80%			OFF	OFF	ON			
	85%			ON	OFF	ON			
	90%			OFF	ON	ON			
	95%			ON	ON	ON			
Time	60						OFF	OFF	OFF
	55						ON	OFF	OFF
	50						OFF	ON	OFF
	45						ON	ON	OFF
	40						OFF	OFF	ON
	35						ON	OFF	ON
	30						OFF	ON	ON
	25						ON	ON	ON

## Juno First DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	3	ON	ON						
Difficulty	1 (Easiest)			OFF	OFF	OFF			
	2			ON	OFF	OFF			
	3			OFF	ON	OFF			
	4			ON	ON	OFF			
	5			OFF	OFF	ON			
	6			ON	OFF	ON			
	7			OFF	ON	ON			
	8 (Hardest)			ON	ON	ON			

## Xevious DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	1	ON	OFF						
	2	OFF	ON						
	5	ON	ON						
Flags Award	Yes			OFF					
Bonus Life	No			ON					
Difficulty	Normal				OFF	OFF			
	Easy				ON	OFF			
	Hard				OFF	ON			
	Hardest				ON	ON			
Extra Life	20k50k60k / 20k70k70k						OFF	OFF	OFF
	10k40k40k / 10k50k50k						ON	OFF	OFF
	10k50k50k / 20k50k50k						OFF	ON	OFF
	20k50k50k / 20k60k60k						ON	ON	OFF
	20k70k70k / 20k80k80k						OFF	OFF	ON
	20k80k80k/30k100k100k						ON	OFF	ON
	20k 60k / 20k 80k						OFF	ON	ON
	None						ON	ON	ON

DIP SW2		1	2	3	4	5	6	7	8
Machine Set	Set 1	OFF	OFF						
	Set 2	ON	OFF						
	Set 3	OFF	ON						
	Super Xevious	ON	ON						

## Mr. Do's Castle DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Medium	ON	OFF						
	Hard	OFF	ON						
	Hardest	ON	ON						
Machine Set	Set 1			OFF					
	Set 2			ON					
Advance Level On Getting Diamond	Off				OFF				
	On				ON				
Extra Life	Easy					OFF			
	Hard					ON			
Life	3						OFF	OFF	
	4						ON	OFF	
	5						OFF	ON	
	2						ON	ON	

## Moon Cresta DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	30000	OFF							
	50000	ON							
Machine Set	Set 1		OFF						
	Set 2		ON						

## Pinball Action DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
* Control	Mode 1	OFF	OFF						
	Mode 2	ON	OFF						
	Mode 3	OFF	ON						
	Mode 4	ON	ON						
Life	3					OFF	OFF		
	4					ON	OFF		
	5					OFF	ON		
	2					ON	ON		

### \*Control

	Left Paddle	Right Paddle	Shoot	Shake
Mode 1	LEFT	RIGHT	S1	S2
Mode 2	S1	S2	UP/DOWN	LEFT/RIGHT
Mode 3	LEFT	RIGHT	UP	S1
Mode 4	LEFT	RIGHT	UP	DOWN

DIP SW2			1	2	3	4	5	6	7	8
Extra Life	70k	200k	OFF	OFF	OFF					
	70k	200k	1000k	ON	OFF	OFF				
	100k			OFF	ON	OFF				
	100k	300k		ON	ON	OFF				
	100k	300k	1000k	OFF	OFF	ON				
	200k			ON	OFF	ON				
	200k	1000k		ON	ON	ON				
	None			ON	ON	ON				
Extra	Easy					OFF				
	Hard					ON				
Difficulty (Flippers)	Easy						OFF	OFF		
	Medium						ON	OFF		
	Hard						OFF	ON		
	Hardest						ON	ON		
Difficulty (Outlans)	Easy								OFF	OFF
	Medium								ON	OFF
	Hard								OFF	ON
	Hardest								ON	ON

## Scramble DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	2	ON	ON						
Machine Set	Set 1			OFF					
	Set 2			ON					

## Super Pacman DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	0 (Normal)	OFF	OFF	OFF	OFF				
	1 (Easiest)	ON	OFF	OFF	OFF				
	2	OFF	ON	OFF	OFF				
	3	ON	ON	OFF	OFF				
	4	OFF	OFF	ON	OFF				
	5	ON	OFF	ON	OFF				
	6 (Medium)	OFF	ON	ON	OFF				
	7	ON	ON	ON	OFF				
	8	OFF	OFF	OFF	ON				
	9	ON	OFF	OFF	ON				
	A	OFF	ON	OFF	ON				
	B (Hardest)	ON	ON	OFF	ON				
	C (Easy Auto)	OFF	OFF	ON	ON				
	D (Auto)	ON	OFF	ON	ON				
	E (Auto)	OFF	ON	ON	ON				
	F (Hard Auto)	ON	ON	ON	ON				
Extra Life	*30k 100k					OFF	OFF	OFF	
	30k 100k								
	*30k 120k					ON	OFF	OFF	
	30k 80k								
	*40k 120k					OFF	ON	OFF	
	30k 120k								
	*30k 100k 100k					ON	ON	OFF	
	30k 80k 80k								
	*40k 120k 120k					OFF	OFF	ON	
	30k 100k 100k								
Machine Set	*30k					ON	OFF	ON	
	30k 120k 120k								
	*40k					OFF	ON	ON	
	30k								
	None					ON	ON	ON	
Machine Set	Set 1								OFF
	Set 2								ON

DIP SW2		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	1	ON	OFF						
	2	OFF	ON						
	*5	ON	ON						

## Bomb Jack DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	2	ON	ON						
Bird Speed	Easy			OFF	OFF				
	Medium			ON	OFF				
	Hard			OFF	ON				
	Hardest			ON	ON				
Enemies Number & Speed	Easy					OFF	OFF		
	Medium					ON	OFF		
	Hard					OFF	ON		
	Hardest					ON	ON		
Special Coin	Easy							OFF	
	Hard							ON	

## Shao-Lin's Road DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	5	ON	OFF						
	7	OFF	ON						
	2	ON	ON						
Extra Life	30k 70k			OFF	OFF				
	40k 80k			ON	OFF				
	40k			OFF	ON				
	50k			ON	ON				
Difficulty	Easy					OFF	OFF		
	Medium					ON	OFF		
	Hard					OFF	ON		
	Hardest					ON	ON		

## King & Ballon DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	10000	OFF	OFF						
	12000	ON	OFF						
	15000	OFF	ON						
	None	ON	ON						
Life	2			OFF					
	3			ON					
Speech	Off				OFF				
	On				ON				

## 1943 DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Bird Speed	1(Easiest)	OFF	OFF	OFF	OFF				
	2	ON	OFF	OFF	OFF				
	3	OFF	ON	OFF	OFF				
	4	ON	ON	OFF	OFF				
	5	OFF	OFF	ON	OFF				
	6	ON	OFF	ON	OFF				
	7	OFF	ON	ON	OFF				
	8	ON	ON	ON	OFF				
	9	OFF	OFF	OFF	ON				
	10	ON	OFF	OFF	ON				
	11	OFF	ON	OFF	ON				
	12	ON	ON	OFF	ON				
	13	OFF	OFF	ON	ON				
	14	ON	OFF	ON	ON				
	15	OFF	ON	ON	ON				
	16(Hardest)	ON	ON	ON	ON				
*2 Players Game	2 Credits					OFF			
	1 Credit					ON			
Allow Continue	Yes						OFF		
	No						ON		

\*2 Players Mode is enabled only in Upright and 2-Joystick mode

## Van-Van Car DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	None	OFF	OFF						
	20k 100k	ON	OFF						
	40k 140k	OFF	ON						
	70k 200k	ON	ON						
Life	3			OFF	OFF				
	4			ON	OFF				
	5			OFF	ON				
	6			ON	ON				

## Pacman Plus DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	5	OFF	OFF						
	3	ON	OFF						
	2	OFF	ON						
	1	ON	ON						
Extra Life	None			OFF	OFF				
	20000			ON	OFF				
	15000			OFF	ON				
	10000			ON	ON				
Difficulty	Easy					OFF			
	Hard					ON			
Ghost Name	Normal						OFF		
	Alternate						ON		
Speed	Normal							OFF	
	Fast							ON	

## Dig Dug DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF							
	5	ON							
Extra Life	30k 80k		OFF	OFF					
	30k 100k		ON	OFF					
	30k 120k		OFF	ON					
	30k 150k		ON	ON					
Level Select	Off				OFF				
	On				ON				

## Amidar DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	5	ON	ON						
Extra Life	50k 80k			OFF					
	30k 70k			ON					

## Zaxxon DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	10000	OFF	OFF						
	30000	ON	OFF						
	20000	OFF	ON						
	40000	ON	ON						
Life	3			OFF	OFF				
	5			ON	OFF				
	4			OFF	ON				
	3			ON	ON				



## Game Never Over